

II. REMARKS

By the present paper, claims 1-3, 6 and 7 have been amended. More specifically, independent claim 1 has been amended to address a minor typographical error, and not for a reason related to patentability. Therefore, the present amendment has no further limiting effect on the scope of claim 1.

Claims 2 and 6 have been amended to address minor grammatical issues, and not for a reason related to patentability. Therefore, the present amendment has no further limiting effect on the scope of claims 2 and 6. Claims 3 and 7 have been amended to recite “wherein output drift of the mass flow rate sensor part due to pressure changes of fluid is corrected by output of the pressure sensor part” as supported by ¶¶ [0021], [0049] and [0050] of Applicants’ specification as originally filed.

The present amendment adds no new matter to the above-captioned application.

A. The Invention

The present invention broadly pertains to a corrosion-resistant metal made sensor for measuring mass flow rate and pressure of fluid, such as may be used in a fluid supply line of a semiconductor manufacturing facility. In accordance with an embodiment of the present invention, a corrosion-resistant metal made sensor for measuring mass flow rate and pressure of fluid is provided that includes features recited by independent claim 1. Various other embodiments, in accordance with the present invention, are recited by the dependent claims.

Advantages provided by the various embodiments of the present invention include that a corrosion-resistant metal made sensor for measuring mass flow rate and pressure of fluid is provided that avoids shortcomings of capillary thermal type mass flow rate sensors and is corrosion resistant.

B. The Rejections

Claims 3, 7, 8, 10 and 12 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite.

Claims 1, 4 and 8-10 stand rejected under the judicially created doctrine of obviousness-type double patenting over claim 1 of Ikeda (U.S. Patent 7,363,810, hereafter the “Ikeda Patent”) in view of James (U.S. Patent Application Publication No. 2002/0100316, hereafter the “James Publication”). Claim 2 stands rejected under the judicially created doctrine of obviousness-type double patenting over claim 12 of the Ikeda Patent in view of the James Publication. Claims 3 and 7 stand rejected under the judicially created doctrine of obviousness-type double patenting over claim 1 of the Ikeda Patent in view of the James Publication, and further in view of Kuno (U.S. Patent 3,737,684, hereafter the “Kuno Patent”). Claims 5, 6 and 11-13 stand rejected under the judicially created doctrine of obviousness-type double patenting over claim 4 of the Ikeda Patent in view of the James Publication.

Claims 1, 2, 4-6 and 8-13 stand rejected under 35 U.S.C. § 103(a) as unpatentable over James (U.S. Patent Application Publication No. 2002/0100316) in view of Ikeda (U.S. Patent 7,363,810). Claims 3 and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the James Publication in view of the Ikeda Patent, and further in view of the Kuno Patent. Claims 1, 2, 4-6 and 8-13 also stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Ikeda Patent 7,363,810 in view of the James Publication, and claims 3 and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Ikeda Patent in view of the James Publication, and further in view of the Kuno Patent .

Applicants respectfully traverse the Examiner’s rejections and request reconsideration of the above-captioned application for the following reasons.

C. Applicants' Arguments

In view of the present amendment, claims 1-13 are in compliance with 35 U.S.C. § 112.

i. Obviousness-type Double Patenting Rejections

All of the Examiner's obviousness-type double patenting rejections are based on claims of the Ikeda Patent. Applicants file herewith a terminal disclaimer in compliance with 37 C.F.R. § 1.321. The filing of the terminal disclaimer is timely and overcomes all of the Examiner's obviousness-type double patenting rejections.

ii. The Section 103 Rejections

A prima facie case of obviousness requires a showing that the scope and content of the prior art teaches each and every element of the claimed invention, and that the prior art provides some teaching, suggestion or motivation, or other legitimate reason, for combining the references in the manner claimed. KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 1739-41 (2007); In re Oetiker, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992). In this case, the Examiner has failed to establish a prima facie case of obviousness against Applicants' claimed invention because the Ikeda Patent is not valid prior art for the purposes of determining unpatentability under 35 U.S.C. § 103(a) and the combination of the James Publication and the Kuno Patent fails to teach each and every limitation of the claims.

iii. The Ikeda Patent

The Ikeda Patent discloses "corrosion resistant metal made thermal type mass flow rate sensor and a fluid supply device using the same." The Ikeda Patent is not valid prior art

against any claim of the above-captioned application for multiple reasons, which are discussed as follows.

First, the Ikeda Patent issued on April 29, 2008 from U.S. Patent Application No. 10/553,235, which was filed on **October 14, 2005** as a National Phase application of International Application No. PCT/JP2004/001519, which was filed February 12, 2004. The above-captioned application was filed on August 23, 2006 as the National Phase Application of International Application No. PCT/JP2005/000266, which was filed on **January 13, 2005** and claims priority to Japanese Patent Application No. 2004-047701 filed on February 24, 2004.

In view of the above facts, the Ikeda Patent's effective date as a reference is **October 14, 2005** under 35 U.S.C. § 102(e), which is later than the effective filing date (i.e., **January 13, 2005**) of the above-captioned application. Therefore, the Ikeda Patent is not valid prior art against the claims of the above-captioned application for any reason.

Furthermore, the inventors of the above-captioned application are (i) Kaoru Hirata, (ii) Nobukazu Ikeda, (iii) Kouji Nishino, and (iv) Ryousuke Dohi, which are the same individuals as the inventors of the Ikeda Patent (See, e.g., Section 75 on the face of the Ikeda Patent). Therefore, the Ikeda Patent cannot be valid prior art under 35 U.S.C. § 102(e) because the invention disclosed by the Ikeda Patent is not "by another" as required by Section 102(e).

In addition, the subject matter of the present application and that of the Ikeda Patent were commonly owned by Fujikin Incorporated, Osaka-shi, Japan, at the time the present invention was made. Therefore, assuming the Ikeda Patent is valid prior art under 35 U.S.C. § 102(e) as the Examiner erroneously contends (which is an invalid assumption), the Ikeda Patent is not valid prior art for the purposes of establishing obviousness under 35 U.S.C. § 103(a). See 35 U.S.C. § 103(c).

For all of the above reasons, the Ikeda Patent is not valid prior art against the claims of the above-captioned application for the purposes of establishing patentability under 35 U.S.C. § 103(a). Therefore, no further comment regarding the Ikeda Patent is believed to be necessary.

iv. The Ikeda Document

WO 2004/092688 (hereafter, the “Ikeda Document”) is the International Publication corresponding to International Application No. PCT/JP2004/001519 and published on **October 28, 2004**. Thus, the Ikeda Document corresponds to the Ikeda Patent. A copy of the Ikeda Document is filed herewith. Because the above-captioned application is entitled to a priority date of **February 24, 2004** as discussed above, the Ikeda Document is not valid prior art against the claims of the above-captioned application. Furthermore, because the four inventors of the above-captioned application are the same four individuals responsible for the Ikeda Document, the Ikeda Document cannot be construed under 35 U.S.C. § 102(a) as valid prior art against Applicants’ claimed invention. Therefore, no further comment regarding the Ikeda Document is believed to be necessary.

v. The James Publication

The James Publication discloses a “fluid flow sensor,” which pertains to a flow sensor for determining the velocity and direction of a fluid flow, wherein the sensor includes a substrate, a heat source located on the substrate, and a first and a second heat sensor located on the substrate to detect at least a portion of heat generated by the heat source (See Abstract of the James Publication). According to the James Publication, the first and second heat sensors and the heat source are arranged in a non-linear orientation (See Abstract of the James Publication).

As admitted by the Examiner (Office Action, mailed September 19, 2008, at 10, line 1; and at 12, lines 13-14), the James Publication does not teach, or suggest, (i) “a corrosion-resistant metal substrate” as recited by independent claim 1, and (ii) “wherein output drift of the mass flow rate sensor part due to pressure changes of fluid is corrected by output of the pressure sensor part” as recited by claim 3.

vi. The Kuno Patent

The Kuno Patent discloses a “system for compensating for drift in semiconductor transducer,” wherein the drift compensating system includes a detecting circuit having at least one semiconductor element to generate an output in proportion to a physical quantity to be applied thereto, a first terminal for providing the output, a switching element, a memory circuit connected to the first terminal through the switching element for memorizing the output upon closure of the switching element, and a second terminal connected to the memory circuit (See Abstract of the Kuno Patent). Upon closure of the switching element, the output is applied to the memory circuit to render the first and second terminals to be at the same potential to thereby cancel any drift, and upon a subsequent opening of the switching element, a potential difference appears between the terminals in accordance with any change of the output (See Abstract of the Kuno Patent).

vii. Summary of the Disclosures

The Ikeda Patent is not valid prior art. The Ikeda Document is not valid prior art. The combination of the James Publication and the Kuno Patent fails to teach, or suggest, “a corrosion-resistant metal substrate” as recited by independent claim 1.

For all of the above reasons, the Examiner has failed to establish a prima facie case of obviousness against Applicants’ claims 1-13.

III. CONCLUSION

In view of the present amendment, claims 1-13 are in compliance with 35 U.S.C. § 112. In view of the present filing of a terminal disclaimer with respect to U.S. Patent 7,363,810 (Ikeda Patent) and in compliance with 37 C.F.R. § 1.312, the obviousness-type double patenting rejections have been overcome. With respect to the Examiner's rejection under 35 U.S.C. § 103(a), the Examiner has failed to establish a prima facie case of obviousness because the Ikeda Patent is not valid prior art, and the combination of the James Publication and the Kuno Patent fails to teach, or suggest, "a corrosion-resistant metal substrate" as recited by independent claim 1.

For all of the above reasons, claims 1-13 are in condition for allowance, and a prompt notice of allowance is earnestly solicited.

The below-signed attorney for Applicants welcomes any questions.

Respectfully submitted,

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